

REMARKS

Claims 54, 56, 60, 62, 64, 66, 76, 133, and 137 were pending. Applicant notes with appreciation the allowability of claims 54, 60 and 64.

Applicant has amended claim 56 to recite a transitional phrase of “consisting of” rather than “having”, and to add the word “and” between elements of the group of claimed nucleic acid molecules.

Applicant has amended claim 76 to clarify that one of the pair of nucleic acid molecules is obtained from the recited nucleic acid molecules, and the other of the pair is obtained from a complementary sequence. Support for the amendment of claim 76 is provided in the application, for example, in the paragraph spanning pages 26-27: “One of the primers will hybridize to one strand of the cancer associated antigen nucleic acid and the second primer will hybridize to the complementary strand of the cancer associated antigen nucleic acid....”

No new matter has been added.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claim 56 and 133 under 35 U.S.C. § 112, second paragraph, as indefinite for reciting an improper Markush group.

Applicant has amended claim 56 as suggested by the Examiner.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection made under 35 USC 112, second paragraph.

Rejections Under 35 U.S.C. § 112, First Paragraph

1. The Examiner maintained the rejection of claim 62 and 66 under 35 U.S.C. § 112, first paragraph, as not enabled. Applicant respectfully traverses the rejection.

The enablement rejection is based on the specification not being enabling for immunotherapy of cancer. Applicant argued in response to the previous Office Action that the claims are not directed to immunotherapy of cancer, and therefore that the rejection was improper. The Examiner has rejected this reasoning because “Applicant has not pointed to an alternative use of the expression vectors and host cells which would not be directed to immunotherapy.” Office Action, page. 7, last paragraph. Applicant’s response is that there are several places in the specification that provide alternative uses for the claimed vectors and host cells.

The claims are to expression vectors (claim 62) and host cells containing the expression vector and a nucleic acid encoding MHC molecule (claim 66). The specification clearly states on page 27, lines 14-22 that polypeptides can be produced using expression vectors and host cells containing expression vectors: “Cancer associated antigen polypeptides can ... be expressed recombinantly in a variety of prokaryotic and eukaryotic expression systems by constructing an expression vector appropriate to the expression system, introducing the expression vector into the expression system, and isolating the recombinantly expressed protein.” This is also described on page 31, lines 28-29: “Alternatively, an expression vector may be introduced into cells to cause production of the polypeptide.”

In addition, the specification on pages 30-31 describes using expression vectors to make and test “[t]he activity of variants of cancer associated antigen polypeptides” and “functionally equivalent variants of cancer associated antigen polypeptides”.

Furthermore, preparation of recombinant cancer associated antigens using expression vectors is described in Example 2.

In view of the clear description in the application of alternative uses for the claimed expression vectors and host cells, Applicant respectfully requests reconsideration and withdrawal of the enablement rejection of claims 62 and 66 under 35 USC 112, first paragraph.

2. The Examiner rejected claims 56 and 133 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner indicated that the claim was interpreted as nucleic acid molecules comprising, rather than consisting of, fragments of SEQ ID NO:23.

Without conceding the correctness of the rejection, Applicant has amended claim 56 to recite a transitional phrase of “consisting of” rather than “having”. It is Applicant’s position that the claim as amended is adequately described in the specification.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 56 and 133 under 35 USC 112, first paragraph.

3. The Examiner rejected claim 76 under 35 U.S.C. § 112, first paragraph, as lacking enablement. It appears that the Examiner has rejected the claim based on the possibility that both nucleic acid molecules could be from the same strand of DNA, and thus not be usable for amplification.

Although Applicant does not agree that the claim would be reasonably read in that way, Applicant nevertheless has amended the claim to specify that one of the pair of nucleic acid molecules is from SEQ ID NO:23 or a degenerate sequence and the other of the pair of nucleic acid molecules is from a complementary sequence.


Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 76 under 35 USC 112, first paragraph.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,


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